

WHAT IS CLAIMED IS:

1. A tank joint part welded to a resinous outer surface of a fuel tank for joining another device thereto, and made of a resinous material satisfying the following requirements:

(1) the difference in volume swelling between materials of the tank joint part and the outer surface of the tank is 10% or less when they swell with fuel, as measured under specific conditions; and

(2) the bonding strength between the materials of the tank joint part and the outer surface of the tank is at least 2 MPa, as measured under specific conditions.

2. A tank joint part welded to a resinous outer surface of a fuel tank for joining another device thereto, comprising a joining member made of a resinous material and welded to the outer surface of the tank, and a main member made of a resinous material and engaging the joining member, the resinous materials of the outer surface of the tank and the joining and main members satisfying the following requirements:

(3) every two adjoining materials have a difference in volume swelling of 10% or less when they swell with fuel, as measured under specific conditions; and

(2) every two adjoining materials have a bonding strength of at least 2 MPa therebetween, as measured under specific conditions.

3. The tank joint part according to claim 2, wherein the

main and joining members form a unitary product of two-color or multicolor injection molding.

4. The tank joint part according to claim 3, wherein the main and joining members are complementarily engaged with each other in cross section.

5. The tank joint part according to claim 2, wherein the joining member is of the multilayer structure comprising at least two joining submembers lying between the tank and the main member, and every two adjoining materials satisfying the two requirements (3) and (4).

6. The tank joint part according to claim 5, wherein the main member and the joining submembers form a unitary product of two-color or multicolor injection molding.

7. The tank joint part according to claim 6, wherein the main member and the joining submembers are complementarily engaged with each other in cross section.

8. The tank joint part according to claim 1, wherein the material of the tank joint part has a fuel permeability of 2.5 mg·mm/cm²/day or less as measured under specific conditions.

9. The tank joint part according to claim 2, wherein the materials of the main and joining members have a fuel permeability of 2.5 mg·mm/cm²/day or less as measured under specific conditions.

10. The tank joint part according to claim 5, wherein the materials of the main member and the joining submembers have

a fuel permeability of 2.5 mg·mm/cm²/day or less as measured under specific conditions.

11. The tank joint part according to claim 1, wherein the outer surface of of the tank is of high-density polyethylene, and the tank joint part is of an alloy of a resinous material of low fuel permeability and a polyolefin elastomer.

12. The tank joint part according to claim 11, wherein the resinous material of low fuel permeability is selected from the group consisting of polyphenylene sulfides, polyesters, polyacetals, polyamides and ethylene-vinyl alcohol copolymers.

13. The tank joint part according to claim 2, wherein the outer surface of of the tank is of high-density polyethylene, and the main and joining members are of an alloy of a resinous material of low fuel permeability and a polyolefin elastomer.

14. The tank joint part according to claim 13, wherein the resinous material of low fuel permeability is selected from the group consisting of polyphenylene sulfides, polyesters, polyacetals, polyamides and ethylene-vinyl alcohol copolymers.

15. The tank joint part according to claim 5, wherein the outer surface of the tank is of high-density polyethylene, and the main member and the joining submembers are of an alloy of a resinous material of low fuel permeability and a polyolefin elastomer.

16. The tank joint part according to claim 15, wherein the resinous material of low fuel permeability is selected from the group consisting of polyphenylene sulfides, polyesters, polyacetals, polyamides and ethylene-vinyl alcohol copolymers.

17. The tank joint part according to claim 1, wherein the tank joint part is a fuel filler valve or an onboard refueling vapor recovery valve.

18. The tank joint part according to claim 1, wherein the tank joint part is a pipe for connecting a hose to the tank.

19. The tank joint part according to claim 1, wherein the tank is a single-layered resinous tank or a multilayered tank at least the outer surface layer of which is of a resinous material.

20. The tank joint part according to claim 1, wherein the tank is an automobile fuel tank.